ANNUAL REPORT

1983 - 1984

Alberta
WATER RESOURCES COMMISSION

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The 1983/84 fiscal period was the first full year for the Water Resources Commission. Activities early in the year concentrated on familiarization with the significant water resource issues, the agencies responsible for water management, the planning processes used, and on identification of the significant policy issues requiring attention.

The Commission monitored the Agricultural Land Base hearings on: "Maintaining and Expanding the Agricultural Land Base in Alberta" with respect to water resource related issues, involving both drainage and irrigation.

With respect to drainage, initial evaluation of a floodplain management planning process, specific drainage associated with the High Prairie/Lesser Slave Lake Delta area, erosion and flooding associated with northern areas, was initiated. The Commission also reviewed preliminary river basin planning in all basins, concentrating on the analysis associated with detailed planning nearing completion for the South Saskatchewan River basin.

Consideration of other water resource elements included:

- quality issues, which were reviewed with Environment staff;
- the fishery component of water resource management was reviewed with Fish and Wildlife personnel; and
- field inspections of irrigation rehabilitation projects and a review of the economic studies respecting irrigation costs and benefits were undertaken with Alberta Agriculture personnel.

It was noted by the Commission that the largest water supply problems and major consumptive uses occur in the southern part of the province, and that, from a preliminary assessment, the greater land drainage issues affect the central and northern areas.

These observations, together with advice from the specific departments, lead to the Commission's introduction of a number of projects. These projects were launched to improve background knowledge for decision-making and future program and policy adjustments. Projects were as follows:

1. Development of an Inventory of Alberta's Drainage Requirements

The purpose of this inventory and assessment is to determine the extent and severity of drainage problems in order to assess the feasibility of increasing land use and production by drainage or water consolidation. Because of the distribution of wetlands and restrictive drainage topography, this evaluation will concentrate largely in northern and east-central areas of the province. This study is designed to complement the initiatives respecting maintaining and expanding the Agricultural Land Base in Alberta.

This project is scheduled to be completed in 1985.

From the Commission's standpoint, this study and its objectives are extremely important to enhance the land use and development decision-making process, where significant drainage components are involved.

2. Development of an Inventory of Potentially Irrigable Lands in Southern Alberta

The Commission initiated an investigation involving approximately 2.4 million acres of land to determine within that area the amount which was suitable for long-term production under irrigation. This identification of land will allow wider regional consideration of irrigation and is an integral part of water resource planning. Field testing could not be done after freeze-up in late fall, resulting in deferring the major work to start in 1984.

This project is scheduled for completion in 1987.

3. Snowpack Research Project

The Commission supported research work to extend the evaluation by the Alberta Research Council to determine if practical and operationally sound processes can be developed, to seed clouds in the Rocky Mountain Eastern Slopes area, to increase snowpack. Highest priority for this investigation was placed on the area at the headwaters of the Oldman River.

4. Wastewater Disposal - Irrigation Application

The option of employing irrigation disposal of sewage effluent has been the subject of increased public attention in recent years. To date, the process has been used in a supplementary manner associated with a number of smaller communities. The Commission initiated a technical review to collect and consolidate available information regarding the feasibility of using wastewater for irrigation for communities in the Oldman, Bow, and Red Deer River basins.

The social or public acceptance associated with larger scale use of this concept will require extensive evaluation and research with respect to transportation or piping, the storage, and, the ultimate distribution to crops of varying types.

With the potential for an increase in sewage effluents as populations grow, together with the occurrence of wide variations in stream flows of the receiving waters, continued evaluation of on-land disposal of wastewater seems justified.

5. Water Resources Education Project

The Commission supported a water resources management conference particularly aimed at community and rural leaders interested in agriculture and community improvement. This conference was organized by representatives from the east-central part of the province and held in Hanna. Subsequently, a final report and proceeding was produced and a Regional Water Management Association was formed.

6. Supplemental Irrigation Research Project

A small technical evaluation of the use of irrigation to supplement periodic rainfall shortages in an area in central Alberta.

During the year, the Water Resources Commission was directed to hold public hearings on the South Saskatchewan River Basin Planning Program, the study of which was in the final phases towards the end of the fiscal period. In preparation for these hearings, the main policy issues were reviewed in detail.

The Commission acknowledges the efforts of the various departments involved in water use and management, the extensive knowledge and understanding they have of the issues, and the co-ordination of efforts across the government as a whole.

In summary, the Commission suggests that it is timely to give increased attention to more intense water management processes in southern Alberta due to the stress on both the variable supply and by the increasing demand. At the same time, a need to accelerate planning for water management associated with drainage components, essential to the implementation of land development projects in northern Alberta, is cited.

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